

## 10 General

### 10.1 Commercial Aspects of Gold Applications: From Materials Science to Chemical Science

A review. Current industrial uses have provided a steady annual demand for gold of around 350-400 tonnes in recent years, the bulk of which is centered on electronics applications, with dental uses constituting the second largest application.

C W Corti, R J Holliday from the World Gold Council, London, *Gold Bulletin (London, United Kingdom)* 2004, **37(1-2)**, 20. Increased industrial demand for gold is only likely to come through the emergence of new applications (1) pollution and emission control technologies, including fuel cells (2) advanced electronics, elec. systems and devices (3) chem. processing of a range of bulk and esp. chems. using gold based catalysts (4) advanced coatings exploiting the novel properties of gold, particularly in nanoparticulate form (5) biomedical uses including medical treatments, drugs, implants, sensors and devices.

### 10.2 Preparation of Gold and Silver Nanoparticles and Their Use as Colorants

Review on preparation of Gold and Ag nanoparticles and their use as colorants. Issues relating to preparation of Gold and Ag nanoparticles with the object of using them in coatings is discussed. T Kobayashi from the Dep. R and D,

Nippon Paint Co., Ltd., Neyagawa, Osaka, Japan, *Journal of the Society of Inorganic Materials, Japan*, 2004, **11(313)**, 371. Main attention is paid to a process comprising the steps of using a protective colloid of a water-sol. comb-like polymer, dissolving it in an aq. solution of ion source contg. Au chloride and Ag nitrate, and then adding an amine under stirring to cause the reduction and formation of nanoparticles. A high-concentration stable paste of nanoparticles of Gold and Ag can be produced by such a method. Light absorption based on surface plasmons of Gold and Ag nanoparticles and application of Gold nanoparticles as colorants for coating are discussed.



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NEW INDUSTRIAL APPLICATIONS FOR GOLD

## ***GOLD 2006*** ***NEW INDUSTRIAL APPLICATIONS OF GOLD***

The 4th International Conference on Gold Science, Technology and its Applications will take place on 3rd-6th September, 2006, at the University of Limerick, Limerick, Ireland.

See website for full information.

**Call for papers:** Abstracts are invited for papers and posters by 16th January 2006.

Full details on conference website at: [www.gold2006.org](http://www.gold2006.org)